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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/080,701	02/25/2002	Kazunori Anazawa	112055	8363
25944	7590	08/25/2004	EXAMINER	
OLIFF & BERRIDGE, PLC P.O. BOX 19928 ALEXANDRIA, VA 22320			MAYEKAR, KISHOR	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 08/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. 10/080,701	Applicant(s) ANAZAWA ET AL. <i>cf</i>	
	Examiner Kishor Mayekar	Art Unit 1753	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 26 May 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-29 is/are pending in the application.
- 4a) Of the above claim(s) 1-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 15-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>2/02, 12/03 &amp; 4/04</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Election/Restrictions*

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:
  - I. Claims 1-14, drawn to an apparatus for producing a carbon structure, classified in class 422, subclass 186.04.
  - II. Claims 15-29, drawn to a method for producing carbon structure, classified in class 204, subclass 173.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions of Groups II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus as claimed can be used to practice isotope separations.

3. Because these inventions are distinct for the reasons given above and the

search required for Group II is not required for Group I, restriction for examination purposes as indicated is proper.

4. During a telephone conversation between Examiner Steven VerSteeg and Attorney Joel Armstrong on 26 May 2004 and the confirmation filed 26 May 2004 a provisional election was made with traverse to prosecute the invention of Group II, claims 15-29. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-14 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

*Claim Rejections - 35 USC § 102 and § 103*

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 15, 17, 24, 25 and 28 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by JP-08-048510, a reference with a translation cited by Applicant. See abstract; Figs 1, 5 and 6; and paragraph [0002] and [0003].

9. Claims 15-29 are rejected under 35 U.S.C. 103(a) as being unpatentable over YOMICHI et al. ("Effects of high magnetic field on the Morphology of carbon nanotubes and selective synthesis of fullerenes", Applied Physics letters, Vol. 74, No. 13, 29 March 1999, pp. 1827-1829) in view of JP '510, YOKOMICHI, another reference cited by Applicant, discloses in a method of producing a carbon structure all the steps as claimed except for the detailing of the orientation of the electrodes (abstract and columns in page 1827). JP '510 as applied above in a method of producing a carbon structure the detailing of the electrodes having forefront portions opposed to each other (Figs. 1 or 5). The subject matter as whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified YOKOMICHI's teachings as shown by JP '510 because this a configuration of the electrodes in the arc discharge.

As to the subject matter of each of claims 18-20, the selection of any of known equivalent arrangement magnets would have been within the level of ordinary skill in the art.

As to the subject matter of each of claims 21-23, 26 and 27, the subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings

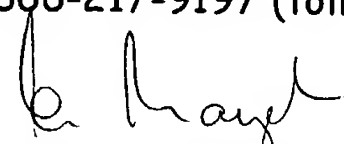
because it has been settled that proper adjustment of a known effective variable of a known or obvious process is within the capabilities of one having ordinary skill in the art. *In re Aller* 105 USPQ 233; *In re Boesch* 205 USPQ 215.

As to the subject matter of claim 25, JP '510 shows the limitation (Fig. 5 or 11). The subject matter as a whole would have been obvious to one having ordinary skill in the art at the time the invention was made to have modified the reference's teachings as shown by JP '510 because the selection of any of known equivalent electrode configurations (cathode not larger than anode) would have been within the level of ordinary skill in the art.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kishor Mayekar whose telephone number is (571) 272-1339. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen can be reached on (571) 272-1342. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Kishor Mayekar  
Primary Examiner  
Art Unit 1753